BRUHAT BANGALORE MAHANAGARA PALIKE

Name of work : Construction of Swimming Pool at Allalasandra Lake premises, in ward no.04 of Yelahanka Assembly Constituency

SANITARY FITTINGS & FIXTURES					
SI.NO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
1	Providing and fixing of white colour vitreous China clay water closet Indian type (Squatting pan) of size 580mm with footrests, 100mm S or P trap, 10 litre low level, PVC flushing cistern(all are approved make) with fittings, CI / MS brackets, 32mm diameter flush pipe fittings and clamps, overflow arrangments with special and 25mm mosquito proof coupling of approved design, painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specification NO. KBS 11 (P.no 74,It no.12.1	Nos	2	3571.14	7142.28
	Basic Rate:	3369.00			
	Area Weightage @ 6%	202.14		3620.96	
	Total	3571.14			
2	Providing and fixing of white colour vitreous China clay,water closet **European type** (pedestal type, P-trap) with black solid plastic seat and lid, C.P brass hinges, rubber buffers. 10 litre low level,PVC flush cistern (all are approved make) with fitting CI/MS brackets, 40mm diameter flush bend with fittings and clamp, overflow arrangements with special and 25mm mosquito proof coupling of approved design, painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specification No. KBS 11 (P.no74,It no.12.5)	Nos	10	5230.04	52300.00
	Basic Rate:	4934.00			
	Area Weightage @ 6%	296.04		5279.86.	
	Total	5230.04			

SLNO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
3	Providing and fixing of white colour vetreous China clay flat back, lipped front **urinal basin** of 430x260x350mm with 5 litres PVC automatic flushing cistern, CI /MS brackets, standard flush pipe and CP brass spreaders with brass unions and GI clamps complete painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specification No. KBS 11(P.no 75,It no.12.7)	Nos	6	2961.78	17891.00
	Basic Rate:	2813.00			
	Area Weightage @ 6%	168.78		3031.60	
	Total	2981.78			
4	Providing and fixing of white colour vetreous China clay flat back **wash basin** size 630x450mm with a single 15mm CP brass piller tap with CI / MS brackets, 32 mm CP brass waste of standard pattern, painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specification No. KBS 11 (P.no78 It.no.12.24)	Nos	6	2998.74	17992.00
	Basic Rate:	2829.00			
	Area Weightage @ 6%	169.74		3048.56.	
	Total	2998.74			
5	Providing and fixing 600x450mm bevel lead **edge mirror** of superior glass with 6mm hard board backing and fixed to wooden cleats with CP screws, washers, including cost of materials, labour complete as per specifications.(P.no 79,It no.12.39)	Nos	6	1302.74	7816.00
	Basic Rate:	1229.00			
	Area Weightage @ 6%	73.74		1316.52	
	Total	1302.74			
6	Providing and fixing C.P brass **towel rail** 740mm length, 20 mm dia with C.P brackets, fixed to wooden cleats with C.P brass screws including cost of materials, labour complete as per specification.(P.no 80,It no.12.45)	Nos	4	792.88	3172.00
	Basic Rate:	748.00			
	Area Weightage @ 6%	44.88		800.30	
	Total	792.88			
7	Providing and fixing 15mm dia C.P angle stop cock with wall flange	Nos	20	273.00	5460.00
				M.R	

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SI.NO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
8	Providing and fixing 32mm dia C.P bottle trap	Nos	4	515.00	2060.00
				M..R	
9	Providing and fixing 15mm dia flexible hose pipe connecting angle stop cock and the pillar cock or cistern	Nos	10	155.00	1550.00
				M.R	
10	Providing and fixing 15mm dia C.P Push cock with C.p wall flange.	Nos	4	212.00	848.00
				M.R	
11	Providing and fixing in position brass stop cock of approved quality of as per dia nominal bore including cost of all materials,labour and HOM of equipments with all leads complete as per specifications. No. KBS (P.no 88,It no.13.27)				
	a. 20mm.dia..	Nos	16	169.60	2714.00
	Basic Rate:	160.00			
	Area Weightage @ 6%	9.60		169.60	
	Total	169.60			
12	Providing and fixing in position brass bib cock of approved quality of as per dia nominal bore including cost of all materials,labour and HOM of equipments with all leads complete as per specifications. (P.no 88,It no.13.23)	Nos	20	231.08	4622.00
	Basic Rate:	218.00			
	Area Weightage @ 6%	13.08		231.08	
	Total	231.08			
13	Providing and fixing wall mounting type CP soap dish . The cost to include all fittings and fastenings all complete as required	Nos	16	468.00	7488.00
				M.R	
14	Providing & fixing heavy cast brass C.P coat hooks fixed with rawl plugs with C.P brass screws all complete as required	Nos	12	247.00	2964.00
				M.R	
15	Providing & fixing of C.P shower rose and shower arm with flanges, connecting shower rose with hot water and cold water connection from stop cocks, all complete as required.	Nos	12	1354.00	16248.00
				M.R	

SI.NO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
	WATER SUPPLY WORKS				
16	Providing & fixing Chorinated Poly Venyl(CPVC) pipes confirming to IS 15778 having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step solvent cement, trenching, refilling and testing of joints complete.(Burried). (Pag no 94,Item no13.87.2,3,4,5,6,7,8)				
	a. 20mm.dia..	Metre	50	132.50	6625.00
	Basic Rate:	125.00			
	Area Weightage @ 6%	7.50		132.50	
	Total	132.50			
	b. 25mm.dia..	Metre	50	174.90	8745.00
	Basic Rate:	165.00			
	Area Weightage @ 6%	9.90		174.90	
	Total	174.90			
	c. 32mm.dia..	Metre	40	227.90	9116.00
	Basic Rate:	215.00			
	Area Weightage @ 6%	12.90		227.90	
	Total	227.90			
	d. 40mm.dia..	Metre	30	318.00	9540.00
	Basic Rate:	300.00			
	Area Weightage @ 6%	18.00		318.00	
	Total	318.00			
	e 50mm.dia..	Metre	40	477.00	19080.00
	Basic Rate:	450.00			
	Area Weightage @ 6%	27.00		477.00	
	Total	477.00			
17	Providing & fixing Chorinated Poly Venyl(CPVC) pipes confirming to IS 15778 having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00mtr spacing, this includes jointing of pipes and fittings with one step solvent cement and testing of joints complete.(work exposed on wall)r KSRB(Pag no 93. Itm no13.85.2,3,4,5,6) -				
	a. 20mm.dia.. Nominal OD	Metre	50	143.10	7155.00
	Basic Rate:	135.00			
	Area Weightage @ 6%	8.10		143.10	
	Total	143.10			

Sl.NO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
	b. 25mm.dia.. Nominal OD	Metre	50	180.20	9010.00
	Basic Rate:	170.00			
	Area Weightage @ 6%	10.20		180.20	
	Total	180.20			
	c. 32mm.dia.. Nominal OD	Metre	25	238.50	5962.50
	Basic Rate:	225.00			
	Area Weightage @ 6%	13.50		238.50	
	Total	238.50			
	d. 40mm.dia.. Nominal OD	Metre	15	328.60	4929.00
	Basic Rate:	310.00			
	Area Weightage @ 6%	18.60		328.60	
	Total	328.60			
	e. 50mm.dia.. Nominal OD	Metre	45	466.40	20988.00
	Basic Rate:	440.00			
	Area Weightage @ 6%	26.40		466.40	
	Total	466.40			
18	Providing & fixing Chorinated Poly Venyl(CPVC) pipes confirming to IS 15778 having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipes with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete.(Concealed work including cutting chasing and good the walls etc).KSRB(Page no 93. Itm 13.86) -				
	a. 15mm.dia..	Metre	40	137.80	5512.00
	Basic Rate:	130.00			
	Area Weightage @ 6%	7.80		137.80	
	Total	137.80			
	b. 20mm.dia..	Metre	120	222.60	26712.00
	Basic Rate:	210.00			
	Area Weightage @ 6%	12.60		222.60	
	Total	222.60			
	c. 25mm.dia..	Metre	100	265.00	26500.00
	Basic Rate:	250.00			
	Area Weightage @ 6%	15.00		265.00	
	Total	265.00			

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Sl.NO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
19	Providing and fixing water meter with stop cock, jam nut, socket in G.I pipe line including cutting and threading the pipe and making long screws including cost of all materials, labour , HOM of equipments and testing complete as per specificationsKSRB(Pag no 88. Itm 13.22)	Set	1	1357.86	1358.00
	Basic Rate:	1281.00			
	Area Weightage @ 6%	76.86		1374.82	
	Total	1357.86			
20	Providing and fixing in position brass ball valve high or low pressure with plastic float of approved quality below nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specification. KSRB(Pag no 89. Itm 13.42)				
	a. 25mm.dia..	Nos	2	630.70	1261.00
	Basic Rate:	595.00			
	Area Weightage @ 6%	35.70		630.70	
	Total	630.70			
	b. 32mm.dia.. M.R.	Nos	2	526.00	1052.00
	c. 40mm dia M.R	Nos	4	726.00	2904.00
21	Providing and fixing in position brass Gate valve with CI wheel of approved quality (screwed end) below nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specification.KSRB(Pag no 89. Itm 13.35				
	a. 32mm.dia..	Nos	3	1007.00	3021.00
	Basic Rate:	950.00			
	Area Weightage @ 6%	57.00		1007.00	
	Total	1007.00			
	b. 40mm.dia..	Nos	3	1346.20	4039.00
	Basic Rate:	1270.00			
	Area Weightage @ 6%	76.20		1346.20	
	Total	1346.20			
	c. 50mm.dia..	Nos	1	2120.00	2120.00
	Basic Rate:	2000.00			
	Area Weightage @ 6%	120.00		2120.00	
	Total	2120.00			

SI.NO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
22	Providing and fixing in position below given nominal bore gun metal non-return valve horizontal type of approved make including cost of all materials, labour and HOM of equipments specificationKSRB(Pag no 90. Itm 13.54				
	a. 40mm.dia,.	Nos	4	1134.20	4537.00
	Basic Rate:	1070.00			
	Area Weightage @ 6%	64.20		1134.20	
	Total	1134.20			
	DRAINAGE WORKS				
23	Providing and fixing to wall,ceiling and floor high density polyethlne pipes 6.00kgf/sq.cm working pressure 75& 110 mm out side diameter with speicial flange ,compression type fitting,wall clips,making good the wall ceiling and floor , including cost of all materils labour chargs , HOM of quipment and testing complete as per specificatiion (Pag no 91 Itm 13.71				
	a. 75mm dia	Mtrs.	120	418.70	50244.00
	Basic Rate:	395.00			
	Area Weightage @ 6%	23.70		418.70	
	Total	418.70			
	b. 110mm dia	Mtrs.	100	599.96	59996.00
	Basic Rate:	566.00			
	Area Weightage @ 6%	33.96		599.96	
	Total	599.96			
	a. 32mm dia	Mtrs.	40	246.98	9879.00
	Basic Rate:	233.00			
	Area Weightage @ 6%	13.98		246.98	
	Total	246.98			
24	Providing and fixing CI Nahani trap of approved make conforming to ISI specifications and construction of Cistern in M-15 as per directions (Rate is inclusive of cost of materials and fixtures and conveyance of materials to work spot).10 cmsx 7.5 (Page No.85 I.No.12.113.1				
	Supply :	Nos.	30	265.00	7950.00
	Fixing :				
	Basic Rate:	250.00		265.00	
	Area Weightage @ 6%	15.00			
	Total	265.00			

SI.NO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
25	Providing and fixing 7.5 cms to 15.00 cms dia NP granting 100 mm dia Pag no 85. Itm 12.111 -				
	a. 125mm dia. Supply :	Nos.	30	169.60	5088.00
	Fixing :				
	Basic Rate:	160.00		169.60	
	Area Weightage @ 6%	9.60			
	Total	169.60			
26	Providing stoneware gully trap, of approved quality and make fixing in CC1:2:4 and plastering with CM 1:3 wherever necessary. (Rate includes cost of all materials, fixtures and leads) (15cms x 10cms)KSRB(Pag no 85. Itm 12.111 - 2	Nos.	5	286.20	1431.00
	Basic Rate:	270.00			
	Area Weightage @ 6%	16.20		286.20	
	Total	286.20			
27	Providing and fixing PVC (6kg/sq.cm) soil waste vent pipe including all fittings, Eg: Bends, tees, elbows collars, juction, inspection doors, cowls, offset acess pipes, jointing with PVC solution, in making bores punctures in slab and wall and making good of the same, cost shall include providing steel brackets and fasterners.				
	a. 75mm dia	Mtrs.	25	195.00	4875.00
				M.R.	
	b. 110mm dia	Mtrs.	60	383.00	22980.00
				M.R.	
28	Constructing brick masonry inspection chamber 600x600mm, and 450mm depth, (clear inside dimension) for pipeline with one or two inlets, using table mounted non-modular bricks of class designation 50 in cement mortar 1:5, C.I cover with frame (light duty) 600x 600mm internal dimensions, total weight of cover 23kg and weight of frame 15kg) R.C.C top slab with cement concrete 1:2:4 mix 20mm and downsize granite metal, foundation concrete 1:5:10 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications Pag no 70. Itm 11.50.1	Nos.	4	8628.40	34514.00
	Basic Rate:	8140.00			
	Area Weightage @ 6%	488.40		8628.40	
	Total	8628.40			

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SI.NO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
29	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom 0.91 deep and 0.56m dia at top with table moulded non-modular bricks of 50 class designation 50 in cement mortar 1:4, inside cement plastered 12mm thick with cement mortar 1:3, finished with a floating coat of neat cement, foundation concrete 1:3:6 mix using 40mm and downsize granite metal and making necessary channel in cement concrete 1:2:4 mix with 20mm and downsize granite metal finished with a floating coat of neat cement, with S.F.R.C cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter confirming IS:12592, total weight cover and frame to be not less than 182 kg, fixed in cement concrete 1:2:4, 20mm and downsize broken granite metal, providing and removing centering, shuttering including cost of materials, labour charges, HOM of machineries complete as per specifications. (Excavation, foot rests and 12mm thick cememnt plaster on the external surface shall be paid separately)KSRB(Pag no68. Itm 11.37 -	Nos.	2	12934.12	25868.00
	Basic Rate:	12202.00			
	Area Weightage @ 6%	732.12		13612.20	
	Total	12934.12			
30	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom 0.91 deep and 0.56m dia at top with table moulded non-modular bricks of 50 class designation 50 in cement mortar 1:4, inside cement plastered 12mm thick with cement mortar 1:3, finished with a floating coat of neat cement, foundation concrete 1;3:6 mix using 40mm and downsize granite metal and making necessary channel in cement concrete 1:2:4 mix with 20mm and downsize granite metal finished with a floating coat of neat cement, with S.F.R.C cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter confirming IS:12592, total weight cover and frame to be not less than 182 kg, fixed in cement concrete 1:2:4, 20mm and downsize broken granite metal, providing and removing centering, shuttering including cost of materials, labour charges, HOM of machineries complete as per specifications. (Excavation, foot rests and 12mm thick cememnt plaster on the external surface shall be paid separately)KSRB(Pag no68. Itm 11.37 -				
	(1.67m depth)	Nos.	2	19923.76	39848.00
	Basic Rate:	18796.00			
	Area Weightage @ 6%	1127.76		21170.32	

SLNO	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
	Total	19923.76			
31	providing and fixing on wall surface 4 kg/sq.cm HDPE rain down water pipes 110mm outer dia approved make and brand with necessary specials like shoes, bends and offsets fixed with iron clamps, wall plugs, screws, including cost of materials, labour, complete as per specifications P.No.47item No.8.19	mtr	30	598.90	17967.00
	Basic Rate:	565.00			
	Area Weightage @ 6%	33.90		601.07	
	Total	598.90			
	Miscelleneous and Unforeseen Charges				926.22
	SUB TOTAL				612000.00

(RUPEES SIX LAKHS TWELVE THOUSAND ONLY

CERTIFICATES

1) The work spot has been inspected and found to be necessary
2) This estimate is prepared as per KPWD SR. of 2014-15 & Approved Rates
3) The provisions were made in this estimate are necessary and adequate.
4) This works come under B.B.M.P. limits.
5) The work is not Spilt Up.

Project Sub Division
Yelahanka Zone, BBMP

Assistant Executive Engineer
Project Sub Division
Yelahanka Zone, BBMP

Executive Engineer
Project division
Yelahanka Zone, BBMP Bangalore

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BRUHAT BANGALORE MAHANAGARA PAILKE

Name of work : Construction of Swimming Pool at Allalasandra Lake premises, in ward no.04 of Yelahanka Assembly Constituency

SUMMARY FOR ELECTRICAL WORKS

SI.NO		DESCRIPTION OF WORK	TOTAL AMOUNT
1	PART-A:	SUBSTATION EQUIPMENT	760,686.00
2	PART-B :	EARTHING SYSTEM	116,128.50
3	PART-C :	L.T PANELS AND DISTRIBUTION BOARDS	278,834.80
4	PART-D :	SUBMAINS CIRCUIT MAINS / POWER WIRING .	608,182.00
5	PART-E :	LIGHT AND FAN FIXTURES	547,079.00
6	PART-F :	CABLE AND CABLE END TERMINATION	283,031.10
7	PART-G :	MISCELLANEOUS ITEMS	63,245.00
		GRAND TOTAL	**2,657,186.40**

(RUPEES TWENTY SIX LAKHS FIFTY SEVEN THOUSAND ONE HUNDRED EIGHTY SIX AND PAISE FORTY ONLY

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BRUHAT BANGALORE MAHANAGARA PALIKE

Name of the Work: Construction of Swimming Pool at Allalasandra Lake premises, in ward no.04 of Yelahanka Assembly

ELECTRICAL ESTIMATE

Sl No	Description Of Work	Qty	Rate	Unit	Amount
	PART A:- SUBSTATION EQUIPMENT				
1	Supply and erection of 11Mtr Spun Pole including earth work etc., complete as per the standard technical specification of BESCOM P.No- 33 I.No- 5.3	1	22957.00	Each	22957.00
2	Supply And Fixing of Single Pole Mounted Transformer Kit for 100/250KVA on 11Mtr Spun Pole etc. complete as per the standard technical specification of BESCOM P.No-33 I.No-5.7	1	31800.00	Each	31800.00
3	Supplying and Fixing ..... including all Hardware's etc. complete as per the standard technical specification of BESCOM P.No-33 I.No-5.8 5.8.8) GOS Set 200 Amps Single break	1	9840.00	Each	9840.00
4	Supplying and Fixing ..... including all Hardware's etc. complete as per the standard technical specification of BESCOM P.No-33 I.No-5.8 5.8.1) H Frame Set	1	4560.00	Each	4560.00
5	Supply and fixing of .....cross arm including all Hardware's complete as per the standard technical specification of BESCOM P.No-33 I.No-5.4 5.4.3) Horizontal 50x450x6mm -980mm	2	562.00	Each	1124.00
6	Supplying and Fixing .....including all Hardware's etc. complete as per the standard technical specification of BESCOM P.No-34 I.No-5.9 5.9.4) Disc Insulator 70/90 KN	6	540.00	Each	3240.00
7	Supplying and Fixing .....including all Hardware's etc. complete as per the standard technical specification of BESCOM P.No-34 I.No-5.9 5.9.3)11 KV Pin Insulator	6	114.00	Each	684.00
8	Supplying and Fixing ..... including all Hardware's etc. complete as per the standard technical specification of BESCOM P.No-33 I.No-5.8 5.8.8)HT ST Support 50x8 mm -1-	2	172.00	Each	344.00
9	Supply and fixing of .....cross arm including all Hardware's complete as per the standard technical specification of BESCOM P.No-33 I.No-5.4 5.4.1)4 Pin 45x45x5mm -1110mm	4	461.00	Each	1844.00
10	Supplying and Fixing ..... including all Hardware's etc. complete as per the standard technical specification of BESCOM P.No-33 I.No-5.8. 5.8.10)Horn Gap Fuse Unit (H.G.)	1	1320.00	Each	1320.00
11	Supplying and Fixing ..... including all Hardware's etc. complete as per the standard technical specification of BESCOM P.No-34 I.No-5.8. 5.8.12)Lightning Arrestor 9KV 5kA polymeric type.	1	4250.00	Each	4250.00

	Supplying erection, testing and commissioning of 11kV Load Break Switch with 4 wire- (with Neutral) Metering cubicle and connected accessories, hardware's etc. suitable for outdoor type complete as per latest IS standard technical specification. LBS should be approved by BESCOM P.No-76 I.No-8.12	1	319987.00	Each	319987.00
	System :11KV, 3PH, 50HZ.				
	Fault level: 350 MVA.				
12	Installation : OUTDOOR.				
	a.Onload AIR BREAK switch with fuse trip mechanism.,3P,400A, 12KV,18.4 KA, 350MVA - 1 no				
	b.11KV HRC Fuses with triping striker pin suitable Amps - 3nos				
	c.Aluminium busbar, suitable rating 3 Phase,Air insulated with heat shrinkable sleevs - 1set				
	d.Earth 25X3 mm Tin coated copper busbar - 1set				
	e.Busbar supports resin cast with 33KV die electric and mechanical strength - 1 set				
13	Caution/Danger Board as per Drawing No. BESCOM/GM/CP/40/Dt: 24.10.07 CDS-31 Sl No-23	2	163.00	nos	326.00
14	GI Pipes B - Class GI Pipe - 150 mm Dia Dia 768058 Sl.No-444 I.No-59.9	10	1144.00	Mtrs	11440.00
15	TRANSFORMER:- Supplying, erecting, testing and commissioning of ..... KVA capacity Copper wound Distribution Transformer 11KV/433V with Off Load Tap Switch, Buchholtz relay winding temperature indicator, oil temperature indicator, marshalling box with wiring, magnetic oil level indicator with +5% to-10% Steps of 2.5% with HT and LT cable end boxes including all standard accessories as per latest IS standard technical specification. 8.10.2) 100 KVA P.No-76 I.No-8.10	1	328700.00	Each	328700.00
16	LT KIOSK:- LT Distribution Box for 63/100 KVA Transformer with 1No 160Amps 25kA 4Pole MCCB, suitable capacity aluminum bus bar mounted in 16SWG powder coated M.S.Box suitable to mount at Transformer Centre as per BESCOM. P.No-76I.No-8.16	1	18270.00	Set	18270.00
	Total A:-				**760686.00**
	B. EARTHING SYSTEM				
1	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia P.NO-55 I.No-7.1	6	2727.00	Each	16362.00

2	Supplying fixing and wiring earth electrode for grounding of lifts, transformers, DG sets etc. using 40mm dia 2.9mm thick 2.5 mtr long GI pipe with GI funnel with mesh and suitable size reducer fixed on the top of the earth electrode. The funnel should be enclosed in a CC chamber of 400x400x400mm with a cast iron cover. The earth electrode shall have staggered holes of 12mm dia and the electrode should be covered 150mm all-round with alternate layers of salt and charcoal from the bottom of the CC chamber. The connection from the electrode is to be established through GI strip using GI bolts and nuts. P.NO-55 I.No-7.2	8	4317.00	Each	34536.00
3	Supplying and running of Copper strips for grounding connections, using necessary fixing materials as required. P.NO-55 I.No-7.3				
	7.3.6) 25x3mm Copper strip	17	523.00	Mtr	8891.00
	7.3.7) 25x6mm Copper strip	12	1018.00	Mtr	12216.00
	7.3.10) 600x600x3mm plate	4	7148.00	Each	28592.00
4	Supplying and running of GI strips for grounding connections, using necessary fixing materials as required. P.NO-55 I.No-7.3				
	7.3.1) 25x3mm GI strip	109	77.00	Mtr	8393.00
	7.3.3) 40x6mm GI strip	20	166.00	Mtr	3320.00
	7.3.5) 600x600x3mm GI Plate	4	784.00	Each	3136.00
5	Supplying and running GI/Copper conductor for grounding and (along with other wires in conduit system of wiring) using necessary suitable size clamps, nails, guttes/spacers etc. GI Wire P.No-64 I.No-7.22				
	7.22.3) 8 SWG	35	19.50	Mtr	682.50
	Total P:-				**116128.50**
	PART C:-L.T Panel boards and distribution boards				
	1.0) Main LT Panel				
1	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete. P.No-49 I.No-6.40				
	6.40.1) 14SWG	97815	0.37	Sqcms	36191.55
2	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. P.No-49 I.No-6.39				
	6.39.5) 75x150x75x6mm C channel	5	791.00	mtr	3955.00
3	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947.				
	(Icu = Ics) FOUR POLE P.No-46 I.No-6.13				
	6.13.8) 200Amps 35kA.(Incoming)	1	14592.00	Each	14592.00
	6.13.7) 125-160Amps 25kA.(Outgoing)	2	7372.00	Each	14744.00

4	Supplying and fixing of Shunt trip suitable for MCCB,CBCT. P.No-46 I.No-6.14	3	1486.00	Each	4458.00
5	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 6.16.1) 5-32Amps SP P.No-47 I.No-6.16	3	418.00	Each	1254.00
	6.16.5) 5-32Amps TPN (Outgoing)	6	1547.00	Each	9282.00
6	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C. P.No-48 I.No-6.36	3	442.00	Each	1326.00
7	Supplying, fixing and wiring 0 to 600Volts 96x96mm AC Voltmeter on existing panel/wood board. P.No-48 I.No-6.20	1	390.00	Each	390.00
8	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter. P.No-48 I.No-6.21	1	140.00	Each	140.00
9	Supplying, fixing and wiring 0 to 1500amps CT operated AC analog type Ammeter without CT P.No-48 I.No-6.24	1	415.00	Each	415.00
10	Supplying, fixing and wiring rotary selector switch suitable for Ammeter. P.No-48 I.No-6.25	1	172.00	Each	172.00
11	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, power factor, KVA, KWH,KVAR suitable for 3 phase, 4 wire LT network with IP 54 degree of protection and completely wired as required with communication Port and Class 0.5s accuracy. P.No-48 I.No-6.31	1	8003.00	Each	8003.00
12	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound. P.No-48 I.No-6.32	3	483.00	Each	1449.00
13	Supplying, fixing and wiring earth leakage relay with core balanced current transformer suitable for single phase 50 Hz AC with latest microcontroller based, digital readout of percentage leakage current, programmable delay/auto/manual reset facility suitable to mount on DIN rail/ flush mounting on panel board. P.No-47 I.No-6.19	1	7998.00	Each	7998.00
14	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat shrinkable coloured PVC sleeve, mounted on phenolic/FRP/DMC insulator which are mounted on powder coated 40x6mm M.S flat frame work in existing panel board. The bus bar shall have suitable holes for termination of incoming and outgoing cables as per IS specification with necessary bolts, nuts and washers etc., complete. 6.38.2) 250Amps 4x30x10mm Aluminum Strips P.No-49 I.No-6.38	3	2942.00	mtr	8826.00
15	Supply and fixing of 4pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers and wiring etc., complete with AC-3 Rating and as per IS-13947.6.12.1) 25Amps P.No-45 I.No-6.39	4	1303.00	Each	5212.00
16	Supplying, fixing and wiring heavy duty low voltage capacitors conforming to IS 2834. 3 phase, 400/440 volts grade, for power factor improvement of rotating machinery. P.No-48 I.No-6.35	20	414.00	KVAR	8280.00

17	Supplying, fixing and wiring Automatic Power Factor controller fully, static units controlled by 14 stage microprocessor operation, relays LED display, self programming function for power stages and operating logic checking facility for healthy and efficient of each individual capacitor bank, measurement of network harmonics with indication when limit values are exceeded, Comprehensive displays with large, three place LED display, Long term memory for settings, protection for over voltage, power factor correction fault and no voltage, to connect / disconnect banks, with automatic recognition or with standard programs. P.No-49 I.No-6.40	1	18660.00	Each	18660.00
	2.0) PUMP Panel (OUT DOOR TYPE)				
1	Panel size 185 cms X 120Cms X 30 Cms Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete. 6.40.1) 14SWG P.No-49 I.No-6.40	75625	0.37	Sqcms	27981.25
2	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron., and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. P.No-49 I.No-6.39 6.39.5) 75x150x75x6mm C channel	5	791.00	mtr	3955.00
3	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics) FOUR POLE P.No-46 I.No-6.13 6.13.7) 125-160Amps 25kA.	1	7372.00	Each	7372.00
4	Supplying and fixing of Shunt trip suitable for MCCB.CBCT. P.No-46 I.No-6.14	1	1486.00	Each	1486.00
5	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 6.16.1) 5-32Amps SP P.No-47 I.No-6.16	3	418.00	Each	1254.00
	6.16.5) 40-63 Amps TPN (Outgoing)	6	1936.00	Each	11616.00
6	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C. P.No-48 I.No-6.36	3	442.00	Each	1326.00
7	Supplying, fixing and wiring 0 to 600Volts 96x96mm AC Voltmeter on existing panel/wood board. P.No-48 I.No-6.20	1	390.00	Each	390.00
8	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter. P.No-48 I.No-6.21	1	140.00	Each	140.00
9	Supplying, fixing and wiring 0 to 1500amps CT operated AC analog type Ammeter without CT P.No-48 I.No-6.24	1	415.00	Each	415.00

10	Supplying, fixing and wiring rotary selector switch suitable for Ammeter. P.No-48 I.No-6.25	1	172.00	Each	172.00
11	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound. P.No-48 I.No-6.32	3	483.00	Each	1449.00
12	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, power factor, KVA, KWH,KVAR suitable for 3 phase, 4 wire LT network with IP 54 degree of protection and completely wired as required with communication Port and Class 0.5s accuracy. P.No-48 I.No-6.31	1	8003.00	Each	8003.00
13	Supplying fully automatic star-delta starter unit push button type with suitable wires, 3 contactors, one adjustable thermal timer mounted on a common base plate held in steel enclosure for use on 400/440 volts 3 phase and wired after fixing to the existing wooden board for motor. 6.2.1) Upto 12.5 HP P.No-44 I.No-6.2	4	6583.00	Each	26332.00
14	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat shrinkable coloured PVC sleeve, mounted on phenolic/FRP/DMC insulator which are mounted on powder coated 40x6mm M.S.flat frame work in existing panel board. The bus bar shall have suitable holes for termination of incoming and outgoing cables as per IS specification with necessary bolts, nuts and washers etc., complete. P.No-49 I.No-6.38 6.38.2) 250Amps 4x30x10mm Aluminum Strips	5	2942.00	mtr	14710.00
	3.0) **MCB Distribution Boards**				
15	Supplying and fixing regular MCB distribution boards on wall / wood board / flush mounting using required clamps, bolts, nuts etc., with provision for fixing suitable type capacity MCB's single phase / 3 phase / single door with powder coated painting. Made out of 14 SWG MS enclosure.III - Double Door P.No-47 I.No-6.17 6.17.7) 4Way TP &N	3	2399.00	Each	7197.00
16	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. P.No-47 I.No-6.16				
	6.16.5) 5-32 Amps TPN	3	1547.00	Each	4641.00
	6.16.1) 5-32 Amps SP	36	418.00	Each	15048.00
	PART -C Total				**278834.80**
	PART D:-SUBMAINS CIRCUIT MAINS/POWER WIRING				
1	Open Conduit System Supplying heavy gauge PVC conduit pipe .....dia .....mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall / stone structure or rawl plugs in case of brick walls and cement plastering the damaged portion using heavy gauge saddles at an interval of 700mm using NF screws. P.No-02 I.No-1.1 1.1.1) 19/20mm dia 2mm thick	469	54.00	mtr	25326.00
	1.1.2) 25mm dia 2mm thick	282	70.00	mtr	19740.00

	1.1.3) 32mm dia 2.5mm thick	162	100.00	mtr	16200.00
2	Concealed Conduit System Supplying heavy gauge PVC conduit pipe .....mm dia .....mm thick confirming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18SWG GI fish wire wherever necessary P.No-02 I.No-1.2 1.2.1) 19/20mm dia 2mm thick	408	43.00	mtr	17544.00
	1.2.2) 25mm dia 2mm thick	1453	57.00	mtr	82821.00
	1.2.3) 32mm dia 2.5mm thick	282	90.00	mtr	25380.00
3	Groove cutting:- Concealed Conduit System Supplying heavy gauge PVC Conduit Pipe ... dia .....mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering up to the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary. P.No-02 I.No-1.3 1.3.1) 19/20mm dia 2mm thick	10	56.00	mtr	560.00
	1.3.2) 25mm dia 2mm thick	750	58.00	mtr	43500.00
	1.3.3) 32mm dia 2.5mm thick	400	88.00	mtr	35200.00
4	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2 X1.5Sq.mm Cable confirming to the GTP, with a 6Amps flush type SP control switch shall be fixed on the existing plastic sheet / gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block, complete for each outlet. GROUP A P.No-05 I.No-2.1 2.1.1) Short point upto 3Mtr from tapping point to out let via switch	13	174.00	Point	2262.00
	2.1.2) Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch	24	245.00	Point	5880.00
	2.1.3) Long point above 6Mtr upto 10Mtr from tapping point to out let via switch	172	363.00	Point	62436.00
	2.1.4) Two outlet in a row, above 3Mtr upto 6Mtr from tapping point to out let via switches	8	482.00	Point	3856.00
	2.1.5) Three outlet in a row, above 6Mts upto 10Mtr from tapping point to out let via switches	2	682.00	Point	1364.00
5	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP -A. P.No-06 I.No-2.5 2.5.2) 1.5 sqmm.	2000	18.60	Mtr	37200.00
	2.5.3) 2.5 sqmm	5000	29.20	Mtr	146000.00
	2.5.4) 4 sqmm	1200	42.10	Mtr	50520.00
6	Supplying and fixing surface/flush mounting unbreakable PVC modular box suitable for mounting modular switch plates with due groove cutting in Brick/C.C wall, including necessary rawl plugs, Machine/NF screws etc., complete. P.No-15 I.No-3.4 3.4.1) 1-3Way	5	83.00	Each	415.00

	3.4.2) 4-5Way	2	102.00	Each	204.00
	3.4.3) 6Way	11	133.00	Each	1463.00
	3.4.5) 10-12Way	11	152.00	Each	1672.00
7	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box. P.No-16 I.No-3.6 3.6.1) 1 to 3 Module	5	109.00	Each	545.00
	3.6.2) 4 Module	2	122.00	Each	244.00
	3.6.3) 6 Module	9	173.00	Each	1557.00
	3.6.4) 8 Module	2	200.00	Each	400.00
	3.6.5) 10 Module	5	227.00	Each	1135.00
	3.6.6) 12 Module	6	267.00	Each	1602.00
8	Supplying and fixing of modular switch/ Socket/stepped electronic fan regulator/ dimmer/telephone socket etc on existing modular switch plate as per IS 3854 and IS 1293 GROUP A P.No-16 I.No-3.7				
	3.7.3) 6Amps 3way socket.	86	95.00	Each	8170.00
	3.7.6) 1000-1200Watts Dimmer	15	539.00	Each	8085.00
	3.7.7) 16Amps one way switch	15	114.00	Each	1710.00
	3.7.9) 32Amps DP switch	13	164.00	Each	2132.00
	3.7.11) TV/Telephone socket	14	82.00	Each	1148.00
	3.7.10) 6/16Amps universal socket	13	147.00	Each	1911.00
	PART -D Total				**608182.00**
	PART E:-Light Fixtures and Fan				
1	Supplying box type suitable for 28W T5 single / twin Lamp & suspension mounted luminaire & optical reflector. Prewired with HF electronic Ballast, push fit type lamp holders & main connectors. Channel cover shall be made of CRCA MS Sheet and finishing is done with stove enameled white with end caps made of engineering plastic 4.7.2) 2x4'-28Watts P.No-20 I.No-4.7	24	1680.00	Each	40320.00
	4.7.1)1x4'-28Watts	76	990.00	Each	75240.00
2	Fixing all types and all capacities of fluorescent / false ceiling / spot light / CFL / LED fittings indoor on the wall / ceiling / rafters / girders using 23/0.0076" twin twisted PVC insulated wires, required Nos of round blocks and clamps. 17.7.2) Using necessary length of G.I. chain P.No-108 I.No-17.7	24	210.00	Each	5040.00
	17.7.1) On wall / ceiling / Rafter / Girders	76	98.00	Each	7448.00
3	Supply of LED Post Top Lantern GARDEN Supply of LED Post Top Lantern with system .... wattage, housing & frame shall be of powder coated, die cast aluminum, diffuser with high density polyethylene IP65 EPDM Gasket. Life 50000 Hrs. @ L70 shall be conforming to IS 10322/Part 5/ Section 5 @ 230V. 5 years Warranty against any manufacturing defect working under standard electrical condition. 4.34.1)LED Post Top Lantern with 12 watts P.No-26 I.No-4.34	48	7204.00	Each	345792.00
4	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.P.No-108 I.No-17.5	52	176.00	Each	9152.00
5	Supplying CFL mirror light fitting with 1x11W CFL lamp, choke, Perspex cover and completely wired for use on 230V 50Hz AC supply P.No-24 I.No-4.23	4	648.00	Each	2592.00

6	Supplying capacitor type ceiling fan complete with down rod blades, shackle, canopies etc., for operation on 230 volts, 50 cycles. Single phase AC supply conforming to ISS-374-1979 and with double ball bearing system. 56" Sweep (1400mm) 9.3.2.1) Regular model P.No-78 I.No-9.3.2	15	2418.00	Each	36270.00
7	Fixing a ceiling / wall mounting fan of all capacities and all types, with necessary clamps and 'S' hook made out of 15mm dia MS rod, with 5 amps. ceiling rose of approved quality with necessary length of 23 / 0.0076 inch PVC insulated twin twisted wire of approved quality, mounted on a suitable size wooden board and wired. P.No-108 I.No-17.9	15	237.00	Each	3555.00
8	Supplying of 1440rpm heavy duty exhaust fan with bracket blades suitable to operate on 230V 50Hz, AC Supply complete. 9.2.1)12" Sweep (300mm)P.No-78 I.No-9.2	5	3654.00	Each	18270.00
9	Fixing one exhaust fan after making a suitable nitch in the wall and finishing with cement mortar and colouring to match the existing wall or brackets, with bolts and nuts and a 5 amps, ceiling rose with sufficient length of 23 / 0.0076 inch PVC insulated twin core wire of approved make with wire mesh and wooden frame. P.No-109 I.No-17.11	5	680.00	Each	3400.00
	PART-E Total				547079.00
	PART-F :- CABLE AND CABLE END TERMINATION				
	HT CABLES				
1	HT Cable GROUP A: Supplying and laying of high tension 11KV cable, Dry Curing & Dry Cooling with true triple extrusion, simultaneously through a single common head, 3 core under ground XLPE (E) cable having stranded compact circular aluminium conductor, screened insulated, insulation screened with extruded semiconducting compound in combination with copper tape, core laid up extruded inner sheathed of GI flat strip armoured and overall PVC sheathed with specified IS 7098/11/85 with latest amendments & confirming to the GTP of GROUP-A 8.3.1) 3Cx95 sqmm P.No-68 I.No-8.3	59	1040.00	Mtr	61360.00
2	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) 7.9.2) In soil (hard) P.No-62 I.No-7.9	40	106.00	mtr	4240.00
	LT CABLES				
3	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A. 7.4.2) 4 core 10 sqmm P.No-56 I.No-7.4	98	118.80	mtr	11642.40
	7.4.12) 3.5 core 185 sqmm	53	816.00	mtr	43248.00
	7.4.10) 3.5 core 120 sqmm	86	556.80	mtr	47884.80
	7.4.8) 3.5 core 70 sqmm	35	270.00	mtr	9450.00
	7.4.5) 3.5 core 25 sqmm	23	165.60	mtr	3808.80

4	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.On wall /Structure 7.8.6) 6 sqmm to 16 sqmm P.No-61 I.No-7.8	98	31.00	mtr	3038.00
	7.8.7) 25 sqmm to 75 sqmm	58	34.80	mtr	2018.40
	7.8.8) 95 sqmm to 150Sqmm	86	42.40	mtr	3646.40
	7.8.9) 185sqmm to 240Sqmm	53	44.50	mtr	2358.50
	END TERMINATION				
	HT CABLE ENDTERMINATION				
5	Supplying and making 11KV (E) Extruded "X" linked for tubing & moulded & cross-linked components using Heat Shrink Stress Control tube having High Permittivity XLPE Terminations- OUTDOOR JOINTING KIT & confirming to the GTP. OUTDOOR 8.2.1) 3Cx95/120sqmm P.No-68 I.No-8.2	1	10108.00	Kit	10108.00
6	Supplying and making 11KV (E) Extruded "X" linked for tubing & moulded & cross-linked components using Heat Shrink Stress Control tube having High Permittivity XLPE Terminations- INDOOR JOINTING KIT & confirming to the GTP. INDOOR 8.2.5) 3Cx95/120sqmm P.No-68 I.No-8.2	5	8373.00	Kit	41865.00
	LT CABLE END TERMINATION				
7	Supplying and fixing of heavy duty cable glands suitable for UG cable of 1.1 KV class (metal only) 7.14.2) 25mm dia P.No-62 I.No-7.14	5	86.00	Each	430.00
	7.14.3) 32mm dia	5	122.00	Each	610.00
	7.14.5) 50mm dia	5	264.00	Each	1320.00
	7.14.7) 75mm dia	5	513.00	Each	2565.00
8	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes 7.21.6) 16 sqmm P.No-64 I.No-7.21	40	11.31	Each	452.40
	7.21.7) 25 sqmm Long Barrel	20	20.59	Each	411.80
	7.21.10) 70 sqmm Long Barrel	10	98.28	Each	982.80
	7.21.12) 120 sqmm Long Barrel	10	196.56	Each	1965.60
	7.21.14) 185 sqmm Long Barrel	10	338.52	Each	3385.20
	CABLE TRAY				
9	Supplying and fixing 2mm thick perforated cable tray with powder coated paint on existing MS angle support using necessary GI bolts/nuts and washer or welding as required. 7.19.1) 150x50mm P.No-63 I.No-7.19	50	440.00	mtr	22000.00
10	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) P.No-62 I.No-7.9				
	7.9.2) In soil (hard)	20	106.00	mtr	2120.00
	7.9.5 C.C. cutting	10	212.00	mtr	2120.00
	PART-F Total				283031.10
	G. MISCELLANEOUS ITEMS				
1	Supplying and fixing of class A (medium duty) GI pipe of wall thick ness not less than 3.25mm pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV class. P.No-62 I.No-7.12.2 7.12.2) 50mm	60	391.00	P/mtr	23460.00
2	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. 6.39.1) 40x40x6mm P.No-49 I.No-6.39	10	263.00	mtr	2630.00

3	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables.7.20.10) 160mm OD / 135mm ID P.No-63 I.No-7.20	10	580.00	mtr	5800.00
4	Concealed Conduit System Supplying heavy gauge PVC conduit pipe .....mm dia .....mm thick confirming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18SWG GI fish wire wherever necessary 1.2.1) 19/20mm dia 2mm thick P.No-02 I.No-1.2	100	43.00	mtr	4300.00
	1.2.2) 25mm dia 2mm thick	60	57.00	mtr	3420.00
	1.2.3) 32mm dia 2.5mm thick	50	90.00	mtr	4500.00
5	Supplying and installation of ABC..... Kgs capacity Fire Extinguishers for multipurpose (Solid, Liquid, Gas, Electrical) a) 5 Kgs , 65	1	2085.00	Each	2085.00
6	Supplying and installation of Dry Chemical powder.....Kg capacity Fire Extinguishers for multipurpose (DG, Electrical Panel) b) 5 Kgs, 32.5	1	1800.00	Each	1800.00
7	Supplying and installation of Mechanical Foam-9ltrs capacity Fire Extinguishers for multipurpose (DG, Electrical Panel) 65/3	1	2600.00	Each	2600.00
8	Supplying and installing of CO2.....Kgs capacity Fire Extinguishers for multipurpose (Servers, Panels, Computers, etc.,) c) 4-5 Kgs 08, 65/5	1	4810.00	Each	4810.00
9	Supplying of Four Bucket stand along with Buckets, 10.83	2	1200.00	Each	2400.00
10	Supplying of Hand Gloves , 8.125	6	170.00	pair	1020.00
11	Supplying and installation of RUBBER MAT 1mt x 2mt-100mm thick, 5.07	4	1105.00	Each	4420.00
	PART-G Total				63245.00
	GRAND TOTAL				2657186.40

CERTIFICATE :-

1. The place was inspected and the work is essential.
2. The provision made in the estimate are adequate and necessary and the work comes in the BBMP limit and is legitimate Charges on the BBMP funds.
3. The estimate is based on KPWD (Ele) S.R.2014-15 Rates. Effective from 1-08-2014 , BESCOM SR and KPWD (Ele)

Assistant Engineer
Project Sub Division
Yelahanka Zone, BBMP

Assistant Executive Engineer
Project Sub Division
Yelahanka Zone, BBMP

Executive Engineer
Project division
Yelahanka Zone, BBMP Bnagalore

(24)

BRUHAT BANGALORE MAHANAGARA PALIKE

Name of work : **Construction of Swimming Pool at Allalasandra Lake premises, in ward no.04 of Yelahanka Assembly Constituency**

D G SET ESTIMATE

Estimate Cost Rs.9,00,000.00

Sl No	Description Of Work	Qty	Rate	Unit	Amount
	D.G.Set and its accessories				
1	Supplying, erection, testing and commissioning of .....KVA Diesel Generating Set on existing CC platform Comprising of Diesel Engine Developing ..... BHP @ 1500 RPM confirming to BS 5514.The engine should be turbocharged, Air/water cooled with 10 % over load for 1hour in every 12 hours of operation coupled to suitable capacity alternator rated at 415V, 0.8 PF(lag) 50 Hz, 3 phase, 4 wire system, confirming to BS 5000/IS 4722. The alternator shall be of brushless type Screen protected, revolving field, Mounted on suitable Channel Iron Base Frame, Complete with suitable capacity Fuel Tank, required nos. of Batteries of 12/24V as per requirement, Acoustic enclosure as per CPCB Approved Norms. 13.1.1 62.5kva/50kw P.No- 89 I.No- 13.1	1	572400.00	Each	572400.00
2	Supply, Erection, testing and commissioning of AMF panel suitable for .....KVA DG set. The panel is of cubical type base/floor mounting control panel with hinged doors, undrilled bottom gland plate, aluminum Bus Bar with the accommodation for .....amps 4 pole contactor for alternator with thermal O/L relay,..... Amps 4 pole contactor for mains, HRC fuse for short circuit protection, Microprocessor based AMF module with supply failure timer, Restoration timer, 3 impulse automatic engine start/stop logic, Mains/generator voltage, ...capacity bypass switch and frequency sensing, PCC 1301 controller with water temperature/Lube oil pressure/ engine speed, Voltage/ampere/Frequency/ KVA, Running-hour count, No of starts, Fault indication, over /under speed, Fails to start, Low oil pleasure, High engine temperature, Under/over voltage, over current, Earth fault relay, with indications for Mains on, Load on Mains, Battery charger on Push buttons, AMF module by pass Mode, Battery charger unit with inbuilt Auto/Manual and Flat/Boost facility. 13.2.2) 62.5 KVA-125kva P.No- 89 I.No- 13.2	1	136557.00	Each	136557.00
3	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A. 7.4.10) 3.5 core 120 sqmm P.No-88 I.No-8.3	100	556.80	mtr	55680.00
4	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.On wall /Structure 7.8.8) 95 sqmm to 150Sqmm P.No-81 I.No-7.8	100	42.40	mtr	4240.00
5	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) 7.9.2) In soil (hard) P.No-62 I.No-7.9	85	106.00	mtr	9010.00

6	Supply and installation of Acoustic insulation using 50mm thick with 24Kg Density glass wool with 24G aluminum perforated sheet complete. P.No-81 I.No-9.3	10	800.00	Sqmt	8000.00
7	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV. 7.12.3) 65mm P.No-62 I.No-7.12	8	585.00	mtr	4680.00
	7.12.2) 50mm	4	391.00	mtr	1564.00
	B. EARTHING SYSTEM				
8	Supplying fixing and wiring earth electrode for grounding of lifts, transformers, DG sets etc. using 40mm dia 2.9mm thick 2.5 mtr long GI pipe with GI funnel with mesh and suitable size reducer fixed on the top of the earth electrode. The funnel should be enclosed in a CC chamber of 400x400x400mm with a cast iron cover. The earth electrode shall have staggered holes of 12mm dia and the electrode should be covered 150mm all-round with alternate layers of salt and charcoal from the bottom of the CC chamber. The connection from the electrode is to be established through GI strip using GI bolts and nuts. P.NO-55 I.No-7.2	8	4317.00	Each	34536.00
9	Supplying and running of Copper strips for grounding connections, using necessary fixing materials as required. P.NO-55, I.No-7.3 7.3.6) 25x3mm Copper strip	17	523.00	Mtr	8891.00
	7.3.7) 25x6mm Copper strip	12	1018.00	Mtr	12216.00
10	Supplying and running of GI strips for grounding connections, using necessary fixing materials as required. P.NO-55, I.No-7.3 7.3.1) 25x3mm GI strip	20	77.00	Mtr	1540.00
	7.3.3) 40x6mm GI strip	20	166.00	Mtr	3320.00
11	Supplying and running GI/Copper conductor for grounding and (along with other wires in conduit system of wiring) using necessary suitable size clamps, nails, guttas/spacers etc. GI Wire P.No-64 I.No-7.22 7.22.3) 8 SWG	35	19.50	Mtr	682.50
					853316.50
	Miscellaneous and Ispectorate and Pollution control Board Charges				46683.50
	TOTAL				900000.00

(RUPEES NINE LAKHS ONLY)

CERTIFICATE :-

1. The place was inspected and the work is essential.
2. The provision made in the estimate are adequate and necessary and the work comes in the BBMP limit and is legitimate Charges on the BBMP funds.
3. The estimate is based on KPWD (Ele) S.R.2014-15 Rates. Effective from 1-08-2014

Assistant Engineer
Yelahanka Zone

Asst. Executive Engineer
Yelahanka Zone

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
(ವಿದ್ಯುತ್) ಯಲಹಂಕ ಉಪ-ವಿಭಾಗ
ಬಿಬಿಎಮ್‌ಪಿ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

EXECUTIVE ENGINEER
Yelahanaka Zone, BBMP

BRUHAT BANGALORE MAHANAGARA PALIKE

Name of work : **Construction of Swimming Pool at Allalasandra Lake premises, in ward no.04 of Yelahanka Assembly Constituency**

FILTRATION EQUIPMENT

S.L.NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	Supply, installtion, testing and commissioning of filters Commercial Bobin wound filter with 160mm flange connection - 157 cumtr/hr Filtration velocity 50m3/SEC. Speed 245m3/Hour Make: 2000 mm DIA/CERTIKIN / Aqua LIX (U.K) directions of the Engineer-In-charge of the work	3	NO	535000.00	**1605000.00**
2	Supply, installtion, testing and commissioning of VALVE BATTERY Frontal Valve Assembly 160 mm connections with Valve support and Brackets Filtration velocity 50m3/SEC. Speed 245m3/Hour Make: 2000 mm DIA/CERTIKIN / Aqua LIX (U.K) directions of the Engineer-In-charge of the work	3	SET	215940.00	**647820.00**
3	Supply, installtion, testing and commissioning of RECIRCULATING PUMPS 10 HP monoblock centrifugal pump 400V 3ph discharge:45 LPS at 13m head suction size:150mm, delivery: 150mm includes 1no standby directions of the Engineer-In-	4	NO	74290.00	**297160.00**
4	Supply, installtion, testing and commissioning of FLOOR INLETS bottom inlet for concrete with S.S. screws made of ABS plastic. Max. flow: 10cum/hr 2 inches threaded fitting directions of the Engineer-In-charge of the work	70	NO	875.00	**61250.00**
5	Supply, installtion, testing and commissioning of GUTTER GRATINGS Made in white, U.V. Stabilized PP. Width: 245mm, Height : 35mm directions of the Engineer-In-charge of the work	102	M	3060.00	**312120.00**
6	Supply, installtion, testing and commissioning of MAIN DRAIN GRATING COVER, material : SS 304 500mm x 500mmx6mm thick with slot openings of 6mm directions of the Engineer-In-charge of the work	3	NO	21000.00	**63000.00**
7	Supply, installtion, testing and commissioning of STAINLESS STEEL PREFILTER 6 inches opening with threaded collar with sight glass, SS sieve, flow:170cum/hr Material: SS 304 directions of the Engineer-In-charge of the work	4	NO	41500.00	**166000.00**
8	Supply, installtion, testing and commissioning of SUCTION INLETS ABS plastic, 2 inches external DIA glue type Flow:3.5 cum/hr, with threaded cap directions of the Engineer-In-charge of the work	10	NO	875.00	**8750.00**

a	Supply, installtion, testing and commissioning of STAINLESS STEEL LADDERS made of SS 316 with pipe dia 38mm with non skid steps with embossed finish or checkered finish overflow model No of steps = 3 directions of the Engineer-In-charge of the work	2	NO	51750.00	103500.00
b	No of steps = 4 directions of the Engineer-In-charge of the work	2	NO	55315.00	110630.00
c	No of steps = 5 directions of the Engineer-In-charge of the work	2	NO	66125.00	132250.00
10	Supply, installtion, testing and commissioning of MAINTENANCE KIT COMPRISING OF: a) LEAFE RAKE Deep bag net made in polypropylene and polyester netting butterfly nut connection directions of the Engineer-In-charge of the work	2	NO	2000.00	4000.00
b	Curved brushes made in polypropylene for pool basins and scum liners directions of the Engineer-In-charge of the work	2	NO	2400.00	4800.00
c	Straight brushes made in polypropylene for pool basins and scum liners directions of the Engineer-In-charge of the work	2	NO	2400.00	4800.00
d	Reinforced aluminium telescopic handle 2.4/4.8m with clip connection directions of the Engineer-In-charge of the work	2	NO	4400.00	8800.00
e	Metallic Anodized Aluminium Vacuum head directions of the Engineer-In-charge of the work	2	NO	19700.00	39400.00
f	Extensible handles for cleaning attachments in anodized aluminium which can be adapted to the entire range of cleaning equipment, brushes, leaf skimmers and scoops 10m long directions of the Engineer-In-charge of the work	2	NO	4370.00	8740.00
g	Transparent blue plastic vacuum hose 1 1/2" dia 30mtr slong including hose cuffs for connection to suction inlets directions of the Engineer-In-charge of the work	2	NO	7100.00	14200.00
11	Supply, installtion, testing and commissioning of TEST KIT for checking free Chlorine & pHTablet type DPD directions of the Engineer-In-charge of the work	2	SET	1650.00	3300.00
12	Supply, installtion, testing and commissioning of POOL CLEANER trolly mounted with 1.5 Hp self priming pump with prefilter, starter and 63mm flexible hose directions of the Engineer-In-charge of the work	1	NO	49000.00	49000.00
13	Supply, installtion, testing and commissioning of LANE SEPERATOR ROPES directions of the Engineer-In-charge of the work	10	SET	38500.00	385000.00
14	Supply, installtion, testing and commissioning of ANCHOR HOOKS STAINLESS STEEL fixed to end walls for lane ropes directions of the Engineer-In-charge of the work	20	NO	3300.00	66000.00
15	Supply, installtion, testing and commissioning of CONTRL PANNEL WIRING, floor mounted CP, Control of Mtrs, volts meter, 3 Phase indicater System, Change over shutter, ELCB, MCB, Pump, coverage to each indicator relay, cable and conduit with pump engineers specification directions of the Engineer-In-charge of the work	1	SET	100000.00	100000.00

16	Supply, installtion, testing and commissioning of GAS CHLORINATION SYSTEM vacuum type cylinder mounted gas (DCM) chlorinator capacity 0-500 gms/hr, chlorination system consisting of filter Assembly, Vacuum Regulator, flow meter assembly, control valve assembly, injector assembly including booster pump assembly and piping complete directions of the Engineer-In-charge of the work	1	SET	327750.00	327750.00
17	Supply, installtion, testing and commissioning of BUTTERFLY VALVES Wafer type PN 10 STD.replacable EPDM sleeve CI body with SS316 disc a) 10 INCHES directions of the Engineer-In-charge of the work	2	NO	26220.00	52440.00
	b) 6 INCHES directions of the Engineer-In-charge of the work	8	NO	19700.00	157600.00
18	Supply, installtion, testing and commissioning of NON RETURN VALVES Material: gun metal Size: 8 inches directions of the Engineer-In-charge of the work	3	NO	19700.00	59100.00
19	Supply, installtion, testing and commissioning of PVC BALL VALVES Size: 63mm directions of the Engineer-In-charge of the work	2	NO	765.00	1530.00
20	Supply, installtion, testing and commissioning of UPVC PIPES a) 400 MM DIA 6 KG/SQCM directions of the Engineer-In-charge of the work	160	M	4900.00	784000.00
	c) 200 MM DIA 6 KG/SQCM directions of the Engineer-In-charge of the work	50	M	1700.00	85000.00
	d) 63 MM DIA 10KG/SQCM directions of the Engineer-In-charge of the work	156	M	260.00	40560.00
	e) 160 MM DIA 6 KG/SQCM directions of the Engineer-In-charge of the work	20	M	13100.00	262000.00
21	Supply, installtion, testing and commissioning of UPVC ELBOW 6 KG/SQCM a) 200 MM directions of the Engineer-In-charge of the work	15	NO	4025.00	60375.00
	c) 400 MM directions of the Engineer-In-charge of the work	8	NO	26800.00	214400.00
	d) 63 MM directions of the Engineer-In-charge of the work	10	NO	175.00	1750.00
	e)160 MM directions of the Engineer-In-charge of the work	20	NO	1650.00	33000.00
22	Supply, installtion, testing and commissioning of UPVC TEE 6 KG/SQCM a) 200 MM directions of the Engineer-In-charge of the work	112	NO	2750.00	308000.00
	c) 400 MM directions of the Engineer-In-charge of the work	10	NO	18055.00	180550.00
	d) 63 MM directions of the Engineer-In-charge of the work	10	NO	175.00	1750.00
	e)160 MM directions of the Engineer-In-charge of the work	20	NO	1650.00	33000.00
23	Supply, installtion, testing and commissioning of UPVC REDUCER 6 KG/SQCM a) 160/400 directions of the Engineer-In-charge of the work	11	NO	20800.00	228800.00
	160/200 directions of the Engineer-In-charge of the work	4	NO	1650.00	6600.00
	63/160 directions of the Engineer-In-charge of the work	50	NO	1090.00	54500.00
	63/200 directions of the Engineer-In-charge of the work	5	NO	1315.00	6575.00

24	Supply, installition, testing and commissioning of STARTING BLOCKS FIBREGLASS 400 mm height non slip finish 0.5x 0.5m with nos 1 to 9 with anchoring fixtures directions of the Engineer-In-charge of the work	9	NO	26220.00	235980.00
					7330780.00
25	Miscellaneous				19220.00
			TOTAL		7350000.00
	(RUPEES SEVENTY THREE LAKHS FIFTY THOUSAND ONLY				

Assistant Engineer
Project Sub Division
Yelahanka Zone, BBMP

Assistant Executive Engineer
Project Sub Division
Yelahanka Zone, BBMP

Executive Engineer
Project division
Yelahanka Zone, BBMP Bangalore